

Environmental Impact Statement 2740 Cedarview

August 26, 2019

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1.0 INTRODUCTION

This report is an Environmental Impact Statement (EIS) prepared by Kilgour & Associates Ltd. (KAL) on behalf of Michael Boucher of DCR Phoenix Homes, in support of the proposed development of 2740 Cedarview (the site) and several adjacent lots. The trigger for this EIS is the potential for the presence of Species at Risk (SAR) within 120 m of the site. The EIS must also address the potential for habitat of SAR on and adjacent to the site. This EIS does not include a detailed inventory of trees on site, as the Tree Conservation Report (TCR) will be updated and filed separately. This report identifies important natural heritage features on site, provides basic mitigations required to protect those features, and indicates what further studies are still required.

2.0 PROPERTY INFORMATION

The proposed development site is a 2.5 ha area located in west end of Ottawa. It includes parcels at:

- 4236 Fallowfield Road (Barrhaven Concession 4RF Part Lot 20 RP 4R7681; Part 2 Less 4R20148 PIN: 044670292),
- 4210 Fallowfield Road (Barrhaven Concession 4RF Part Lot 20 RP4D-82; Parts 1 and 5 PIN: 044670048),
- 4200 Fallowfield Road (Barrhaven Concession 4RF Part Lot 20 PCL 3 PIN: 044670007),
- 4190 Fallowfield Road (Barrhaven Concession Part Lot 20 RP; 4R13732 PART 1 PIN: 044670009), and
- 2740 Cedarview Road (Barrhaven, Concession 4RF Part Lot 20 PIN: 044670010).

The site currently includes three single storey residential dwellings, an old field area, and a former farmstead. The site is surrounded to the north, west, and east by residential development and to the south by Cedarview Middle School and one house recently demolished in 2019.

The site is comprised of properties that are zoned as Development Reserve Zone (DR) (Ottawa, 2018a). The purpose of the zone is to recognize lands that are intended for future urban development. The following uses are permitted under by-law provisions, agricultural use, emergency service, environmental preserve and education area, forestry operation, group home, home-based business, marine facility, detached dwellings, parks, among others.

3.0 SITE AND THE NATURAL ENVIRONMENT

3.1 Site Investigations

The site was investigated by KAL biologist four times. Table 1 describes each of the site visits.

Table 1. Site investigations

Date Time	Weather Conditions	Fieldwork conducted
March 29, 2018 13:50 – 15:15	7°C Fully overcast but not yet raining	Initial site visit <ul style="list-style-type: none"> • Walked back and forth across site and around the perimeter of the site • Reviewed all trees on site and those on adjacent properties as visible from the property boundaries (adjacent lands are private property; direct access is not possible) • Described channel morphology, wetted widths and depths, flow, and substrate characteristics of channels on and adjacent to the site • Checked inside all barn and shed structures on the property and under the eaves of all site buildings for evidence of bird nesting. <ul style="list-style-type: none"> ◦ Possible Barn Swallow nests observed in large barn ◦ No nests were observed anywhere else on site
June 14, 2018 07:45 – 08:15	14°C Fully overcast No rain	1st Check for Barn Swallow presence <ul style="list-style-type: none"> • Rechecked inside all barn and shed structures on the property and under the eaves of all site buildings for evidence of bird nesting. <ul style="list-style-type: none"> ◦ The large barn had been partially dismantled. The previously-observed, potential Barn Swallow nest was actively being used by a family of Eastern Phoebe (<i>Sayornis phoebe</i>) ◦ No other nests were present on site ◦ No Barn Swallows observed flying on or near the site
June 19, 2018 06:20 – 07:00	17°C Sunny with no cloud cover	2nd Check for Barn Swallow presence and HDFA follow-up <ul style="list-style-type: none"> • Rechecked inside all barn and shed structures on the property and under the eaves of all site buildings for evidence of bird nesting. <ul style="list-style-type: none"> ◦ Nest in the large barn was empty (chicks had fledged). Adult phoebes present around site ◦ No other nests were present on site ◦ No Barn Swallows observed flying on or near the site • All HDFs on and around site were walked <ul style="list-style-type: none"> ◦ All HDFs fully dry
July 9, 2018 06:20 – 07:00	21°C Sunny with no cloud cover	3rd Check for Barn Swallow presence <ul style="list-style-type: none"> • Rechecked inside all barn and shed structures on the property and under the eaves of all site buildings for evidence of bird nesting. <ul style="list-style-type: none"> ◦ Adult phoebes present around site, but original nest still empty. ◦ No other nests were present on site ◦ No Barn Swallows observed flying on or near the site

3.2 Surface Water, Groundwater and Fish Habitat

A small, unnamed drain crosses the property near the western end of the site. Channel morphology and flow patterns were examined during an initial site visit for a Headwater Drainage Feature Assessment (HDFA) by KAL biologist Terry Hams on March 29, 2018.

The channel conveys flow southward from site and from the roadside ditch along Fallowfield. The channel leads to a culvert passing through the adjacent school yard. That culvert releases water at the south side of the schoolyard to the ditch system, conveying flows 420 m southeast to the Foster Drain at Hélène-Campbell Road.

At the time of the survey, the south end entrance to the culvert was completely obscured by trash debris (as was much of the channel) and vegetation. The feature had ~ 15 cm of standing water along much of its length. Flow was unmeasurably small, though there was a slight backwards tickle to the Fallowfield roadside ditch, which was otherwise dry. During site surveys in June 2018, that channel, and all adjacent roadside ditches, were completely dry. The feature does not provide any direct fish habitat.

3.3 Vegetation and Land Cover

Site land cover is depicted in Figure 1. The site currently is comprised of three residential dwellings with accompanied manicured lawns, a former farmstead (that since has been demolished) with ancillary buildings and manicured yard, and an old field grassland with small patches of trees. Scattered trees also occur on the farmstead and in yards of the residential dwellings.

Overall, the site contains low quality wildlife habitat, with a high level of human disturbance and non-native plant and tree species. The grassland area located in the center of the site is categorized as Cultural Meadow (CUM) (Lee et al., 1998). This area was used for agricultural purposes until 2014 (according to air photos from geoOttawa (2018b) and gone fallow since then. Cultural Thicket (CUT), forest, and wetland habitats exist to the west of the site, along O'Keefe Court. Additional, CUT and wetland habitat exists to the northeast, the site across the crossing at Fallowfield Road, and Cedarview Road.

3.4 Species at Risk

Table 2 indicates the habitat requirements of SAR known to be potentially present within the broader area and whether the property may provide significant habitat.

During a site survey for SAR potential on March 29, 2018, KAL Biologist Terry Hams noted the presence of eight mud-cup nests within the large barn structure located on the farmstead at 4236 Fallowfield Road. The nests were deemed to possibly be former Barn Swallow nests. The MNRF does not yet have a standardized protocol for conducting Barn Swallow searches. For listed bird species though for which standardized MNRF protocols are available, surveys are generally repeated three times throughout the breeding season. Accordingly, the site was investigated three more times through June and July in 2018 (as per Table 1). Searches were conducted on early mornings of calm days with no precipitation. These conditions correspond with the requirements for standard Breeding Bird Surveys. On all three occasions, all potential nest-supporting structures were searched for active nests. No Barn Swallows were ever observed on or near the site.

In the early spring of 2018 (sometime between March 29th and June 14th, 2018), the large barn was partial disassembled with portions of the exterior walls removed. Only one nest was found on June 14th, and it was occupied by Eastern Phoebe. This species builds nests similar in basic form to Barn Swallows, but uses different lining materials (mostly mosses instead of fine grass). Old Phoebe nests, thus look very similar to old Barn Swallow nests once the linings have blown away over the winter. Barn Swallows however, tend to nest near areas of wide open feeding habitat, which are very limited near the site. Phoebe, tend to nest in less-open areas (i.e. areas with some tree cover), such is generally present at and around the site. As such, the nests originally observed in the large barn were most likely old Phoebe nests. The area does not constitute Barn Swallow habitat and no Barn Swallows were present on site.



Table 2. Species-at-risk potential

Species Name	Provincial (ESA) Status	Habitat Requirement	Habitat on Site	Project Concerns Associated with Habitat on Site
Birds				
Bank Swallow (<i>Riparia riparia</i>)	Threatened	Nest in banks or earthen walls cut by meandering streams and rivers, but artificial banks created by mining may also be used. Foraging occurs over fields, streams, wetlands, farmlands, and still water.	No suitable nesting habitat is located on site or adjacent to the site.	Not observed on site. Negligible potential for presence. Not a concern for this project.
Barn Swallow (<i>Hirundo rustica</i>)	Threatened	Terrestrial open & manmade structures for nesting, near open areas for feeding.	Barns on site provide potential suitability as nest-supporting structures, though the surrounding areas provided limited suitability for feeding. Nest observed in the large barn on site were Phoebe nests. The species was never observed on site.	Not observed on site. Negligible potential for presence. Not a concern for this project.
Bobolink (<i>Dolichonyx oryzivorus</i>)	Threatened	Periodically mown, dry meadow for nesting. Habitat (meadow) should be > 10 ha, and preferably > 30 ha before bobolink are attracted to the site. Not near tall trees	No suitable habitat on or adjacent to the site. The grassland area on site is far too small to provide nesting habitat.	Not observed on site. Negligible potential for presence. Not a concern for this project.
Chimney Swift (<i>Chaetura pelagica</i>)	Threatened	Nests in open chimneys and sometimes in tree hollows (tree > 60 cm dbh). Tend to forage close to water as this is where the flying insects they eat congregate.	No suitable trees or chimney structures on or near the site.	Not observed on site. Negligible potential for presence. Not a concern for this project.
Eastern Meadowlark (<i>Sturnella magna</i>)	Threatened	Periodically mown, dry meadow for nesting. Habitat (meadow) should be > 10 ha, and preferably > 30 ha before bobolink are attracted to the site. Not near tall trees	No suitable habitat on or adjacent to the site. The grassland area on site is far too small to provide nesting habitat.	Not observed on site. Negligible potential for presence. Not a concern for this project.
Henslow's Sparrow (<i>Ammodramus henslowi</i>)	Endangered	Expansive, fallow, tall grass/forb fields with ground mat formation and perches. Moist sites preferred	No suitable habitat. Unknown from the region for 20+ years.	Not observed on site. Negligible potential for presence. Not a concern for this project.
Least Bittern (<i>Ixobrychus exilis</i>)	Threatened	Found in large quiet marshes and, usually near cattails.	No suitable habitat on or adjacent to site.	Not observed on site. Negligible potential for presence. Not a concern for this project.
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	Endangered	Short, sparsely vegetated "pasture land" with scattered shrub species (hawthorn)	No suitable habitat on or adjacent to site.	Not observed on site. Negligible potential for presence.

Species Name	Provincial (ESA) Status	Habitat Requirement	Habitat on Site	Project Concerns Associated with Habitat on Site
				Not a concern for this project.
Eastern Whip-poor-will (<i>Caprimulgus vociferus</i>)	Threatened	Terrestrial mix of open and forested	No suitable habitat on or adjacent to site.	Not observed on site. Negligible potential for presence. Not a concern for this project.
Mammals				
Little Brown Bat (<i>Myotis lucifuga</i>)	Endangered	Widespread, roosting in trees and buildings. Hibernate in caves or abandoned mines.	Trees on site are too small and healthy (no cavities or loose bark) to provide habitat. The buildings on site do not appear to provide any attic space and would not constitute protected habitat regardless.	Negligible potential for presence. Not a concern for this project.
Northern Long-eared Bat (<i>Myotis septentrionalis</i>)	Endangered	Associated with boreal forests, choosing to roost under loose bark and in the cavities of trees. Hibernate in caves or abandoned mines.	No suitable habitat on or adjacent to site.	Negligible potential for presence. Not a concern for this project.
Eastern Small-footed Bat (<i>Myotis leibii</i>)	Endangered	Coniferous forest in hilly country. Hibernate in smaller caves Subject to air movement.	No suitable habitat on or adjacent to site.	Negligible potential for presence. Not a concern for this project.
Eastern Pipistrelle (<i>Pipistrellus subflavus</i>)	Endangered	Forage over water courses or open fields with large trees nearby. They never forage in deep woods. Hibernate in caves or abandoned mines.	Trees on site are too small and healthy (no cavities or loose bark) to provide habitat. The buildings on site do not appear to provide any attic space and would not constitute protected habitat regardless.	Negligible potential for presence. Not a concern for this project.
Turtles				
Blanding's Turtle (<i>Emydoidea blandingii</i>)	Threatened	Quiet lakes, streams, wetlands with abundant emergent vegetation and hummock development and associated upland areas. Hibernates in bogs.	No wetland habitat occurs on or adjacent to the site. The unnamed drain is too small to support this species.	Negligible potential for presence. Not a concern for this project.
Vascular Plants				
American Ginseng (<i>Panax quinquefolius</i>)	Endangered	Rich, moist, relatively mature deciduous forests.	No suitable habitat.	Negligible potential for presence. Not a concern for this project.
Butternut (<i>Juglans cinerea</i>)	Endangered	Variable but typically on well-drained soils.	Most of the site could be deemed suitable, but none are currently present.	Negligible potential for presence. Not a concern for this project.

3.5 Other Natural Heritage Features

There are no provincially or locally significant wetlands, wetlands found in association with significant woodlands, significant valleylands or Life Science Areas of Natural and Scientific Interest on or adjacent to the site.

The nearest natural heritage features to the site is a significant woodland associated with Lytle Park along O’Keefe Court (approximately 650 m to northwest), the provincially significant wetland complex associated with Stoney Swamp Wetland Complex (approximately 1,000 m to northwest), and UNA #53 near Strandherd and Fallowfield (400 m southwest of the site). All of these features are located significantly greater than 120 m from the site (the distance at which a requirement for further of study of potential impacts would be triggered) and are separated from the site by multiple blocks of existing residential development.

4.0 PROJECT DESCRIPTION

The project supported by this EIS is the construction of residential units on the site in the form of 13 low-rise apartment and stack unit blocks (Figure 2). The existing land parcel at 4192 Fallowfield Road, does not form part of the subject site and will remain untouched by the current project. Site preparation will otherwise require the removal of existing site buildings – i.e. at the farmstead and two other residential lots.

The small channel on site will be entombed in a culvert extending over the site and replacing the existing culvert under the schoolyard. Modification of this feature will require approval from the RCVA.

Municipal services are already provided for the area through the recent residential development. The proposed apartment blocks will use these services as well. Road access for the project will be along Fallowfield and Cederview Roads, with additional access points to these roads to be built.



5.0 IMPACT ASSESSMENT

5.1 Impacts to Surface Water and Fish Habitat

The only surface water features on or adjacent to the site are roadside ditches and the small channel on the west portion of the site. The roadside ditches will remain in place. The small channel is an ephemeral feature that does not provide any direct fish habitat. It currently connects the roadside ditch, to a 90 m long culvert under the adjacent schoolyard, which then leads to further roadside ditches. It will be entombed as an extension of existing culvert (the entire length though will be rebuilt).

Per the HDFA for the site (Appendix 2) the management recommendation for the small channel was for “Mitigation”. In this context, the “Mitigation” management recommendation means that the feature is not required to be maintained per se, but its functionality should be replicated. The feature currently serves primality to convey lot drainage – and, during very wet periods, drainage from the upstream areas via the Fallowfield roadside ditch – to the existing culvert south of the site.

Extending the existing culvert across the current site is not anticipated to further reduce functionality of the feature. The current channel dribbles backwards to the roadside ditch under spring conditions, or to be dry. No significant impacts are anticipated to the overall catchment from the proposed development.

5.2 Impacts to Species at Risk

No SAR or SAR habitats are currently located on, or adjacent to the property, or are likely to occur there in the foreseeable future. Therefore, no impacts to SAR or SAR habitats are anticipated.

5.3 Impacts to Natural Features

No natural features occur on site or within 120 m of the site. Therefore, we predict no impacts to natural features from the proposed development.

6.0 MITIGATIONS

6.1 Mitigations for surface water features

Standard erosion and sediment control and mitigation measures must be applied to the site during development. These will be focused on the roadside ditches and the unnamed ditch on the property. Silt fences will be installed along these surface water features when project development presents a risk for surface water runoff. Additionally, topsoil piles will be kept back from surface water features to further prevent runoff. Details of the erosion and sediment control mitigation measures will be included in the environmental management plan for the site.

6.2 Mitigations for Species at Risk

As no SAR are considered as occurring or potentially occurring on or near the site, no other SAR specific mitigations are required.

6.3 Mitigations for Natural Features

Trees are present on site and there should be no clearing of vegetation between April 15 and August 15, unless a qualified biologist has determined that no nesting is occurring within 5 days prior to the clearing. Tree protection measures must be in place for all trees on site planned for retention, and/or adjacent the site prior to any vegetation removal.

No natural features occur on site or within 120 m of the site. Therefore, no specific additional mitigations are required.

7.0 SUMMARY AND RECOMMENDATIONS

It is my professional opinion that no negative impacts are anticipated to listed SAR or other natural heritage features under the proposed property development.

Anthony Francis, PhD
KILGOUR & ASSOCIATES LTD.

Appendix 1
Qualifications of Report Author

Anthony Francis, PhD

Dr. Francis is an ecologist with over 18 years of experience in both terrestrial and aquatic projects. His doctoral thesis work on global plant diversity patterns included conducting tree surveys across North America. As a consulting ecologist he has worked on diverse ecological projects including literature reviews of forestry management and species-at-risk; environmental studies of contaminants (metals and suspended particulates); geomatic and statistical analyses for federal and provincial ministries as well as for private industry; and aquatic and terrestrial species inventories. He has contributed to environmental impact statements and federal environmental screening assessments for creek realignments and other infrastructure projects across Ontario.

Appendix 2
HDFA

Headwater Drainage Feature Assessment DCR Phoenix Cedarview / Fallowfield

November 25, 2018

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Project Number: DCRP763



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1.0 INTRODUCTION

This report is a Headwater Drainage Feature Assessment written by Kilgour & Associates Ltd. (KAL) on behalf of DCR Phoenix related to their proposed redevelopment of 2.5 ha cluster of properties located at the southwest corner of Fallowfield and Cedarview Roads in Ottawa, Ontario. The properties included are: 4236, 4210, 4200 and 4190 Fallowfield Road, and 2740 Cedarview Road. The report provides a detailed description of the single headwater drainage feature (HDFs) crossing property following the field methodologies identified with the *Evaluation, Classification and Management of Headwater Drainage Features Guidelines* (CVC & TCRA, 2013), herein the HDF Guidelines.

The site includes a single drainage channel (Figure 1).

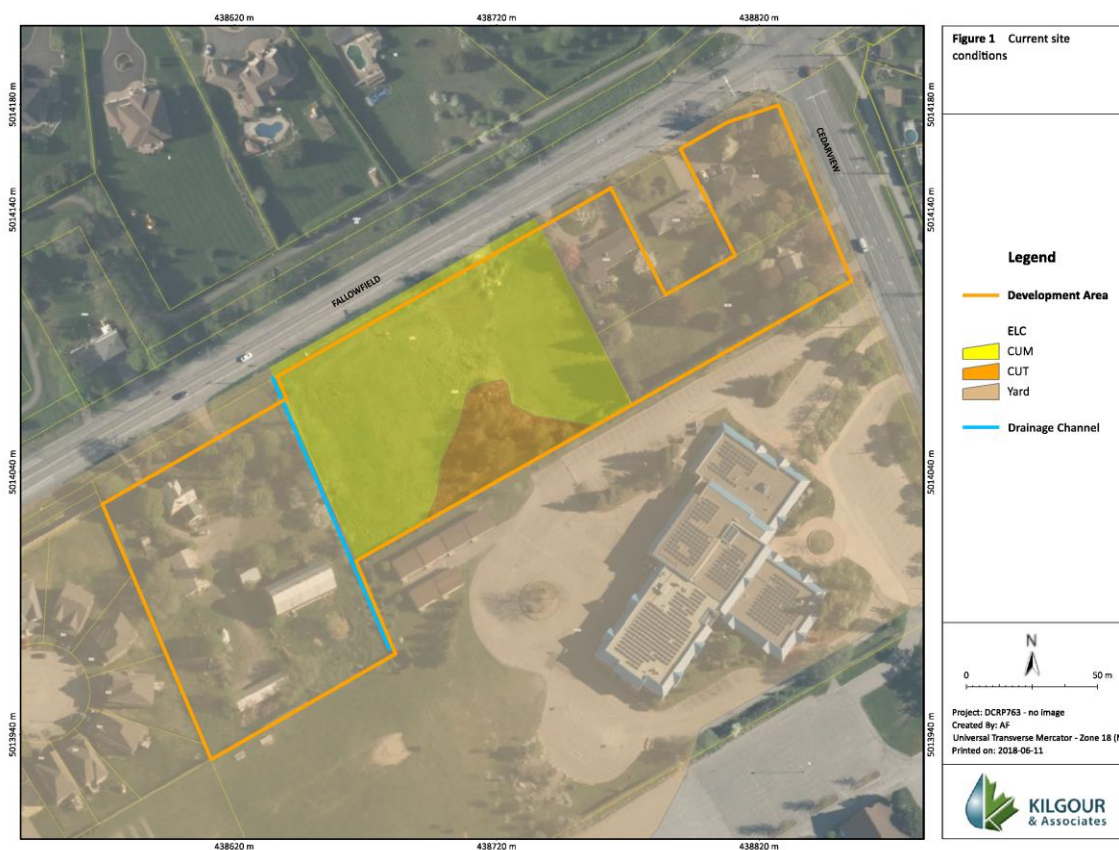


Figure 1. HDF reaches

2.0 HEADWATER DRAINAGE FEATURES

2.1 Assessment Methodology

The Standard level of assessment follows Ontario Stream Assessment Protocol (OSAP) methodologies for descriptions of flow conditions, riparian vegetation and site features that are important components of habitat (headwater sampling protocol OSAP S4.M10). The initial OSAP investigation conducted on March 29, 2018 by KAL biologist Terry Hams, i.e. during the spring freshet.

The protocol calls for a fish survey to describe fish and fish habitat (OSAP S4.M10). The wetted portion of the channel however, was already isolated during the first field visit and the entire channel was noted to be dry on site check on June 14, 2018 by Mr. Hams. No fish other wildlife surveys were therefore conducted.

2.2 General Reach Description

The single reach on site is Reach 1 is a 115 m drainage channel, with a width of ~50 cm for most of its length. The channel conveys flows southward from site and from the roadside ditch along Fallowfield. The channel leads to a 115 m long culvert passing through the adjacent school yard. That culvert releases water at the south side of the schoolyard to ditch system, conveying flows 420 m to the southeast to the Foster Drain at Hélène-Campbell Road.

At the time of the survey, the south end entrance to the culvert was completely obscured by trash debris (as was much of the channel) and vegetation. The feature had ~ 15 cm of standing water along much of its length. Downstream flow was undetectable. At the upstream end however, there was a slight backwards tickle to the Fallowfield roadside ditch (which was otherwise dry) as the channel sits slightly higher than the ditch. The channel would only receive flows from top end if the roadside ditch was filled significantly. With a long culvert at its bottom end, and dry roadside ditch at the top end, the standing water present in the feature onsite (from adjacent snow melt) was effectively isolated.

The channel was filled with grass and leafy debris. The channel passes through a cultural meadow. Until 2014, the east side was under active agriculture and the west side was a lawn area. In 2018, the banks were covered in tall grass with a few trees.



Figure 2. Drainage channel (A) and roadside ditch (B) leading to it March 29, 2018.

2.3 Component Classifications

Table 1. Hydrology Classification, 2017

Drainage Feature	Hydrology Classification					
	Assessment Period	Flow Conditions		Flow Classification	Modifiers	Hydrological Function
		Description	(OSAP Code)			
Reach 1	March 29, June 14	Negligible flow in early spring then dry	2	Ephemeral		Contributing Functions

Table 2. Riparian Classification

Drainage Feature	Riparian Classification			
	OSAP Descriptions	OSAP Riparian Codes	ELC Codes	Riparian Conditions
Reach 1	RUB –Meadow LUB – Lawn	RUB – 4 LUB – 2	CUM -	Contributing Functions

RUB – right upstream bank

LUB – left upstream bank

Table 3. Fish and Fish Habitat Classification

Drainage Feature	Riparian Classification		
	Fish Observation • Fishing effort	Fish & Fish Habitat Designation*	Modifiers/Notes
Reach 1	No fish present, no SAR present. • Dry	Contributing Functions	Some allochthonous material generated in early spring

Table 4. Terrestrial habitat classification

Drainage Feature	Description	Amphibians	Terrestrial Classification
Reach 1	No adjacent wetland areas. Upstream end only connects to residential community. Downstream end is a long culvert through a school yard. No potential as a wildlife corridor.	Frogs and turtles were not considered likely to be present.	Limited Functions

Table 5. Reach dimensions, April 13, 2016

Drainage Feature	Length (m)	Mean Bankfull Width (m)	Mean Wetted Width (m)	Mean Depth (m)
Reach 1	150	0.7	0.5	0.05 - 0.15

3.0 MANAGEMENT RECOMMENDATIONS

The classification categories identified in Section 2 provide the basis of the management recommendations provided here. The following flow chart (Figure 2) combines and translates the classification results to management recommendations.

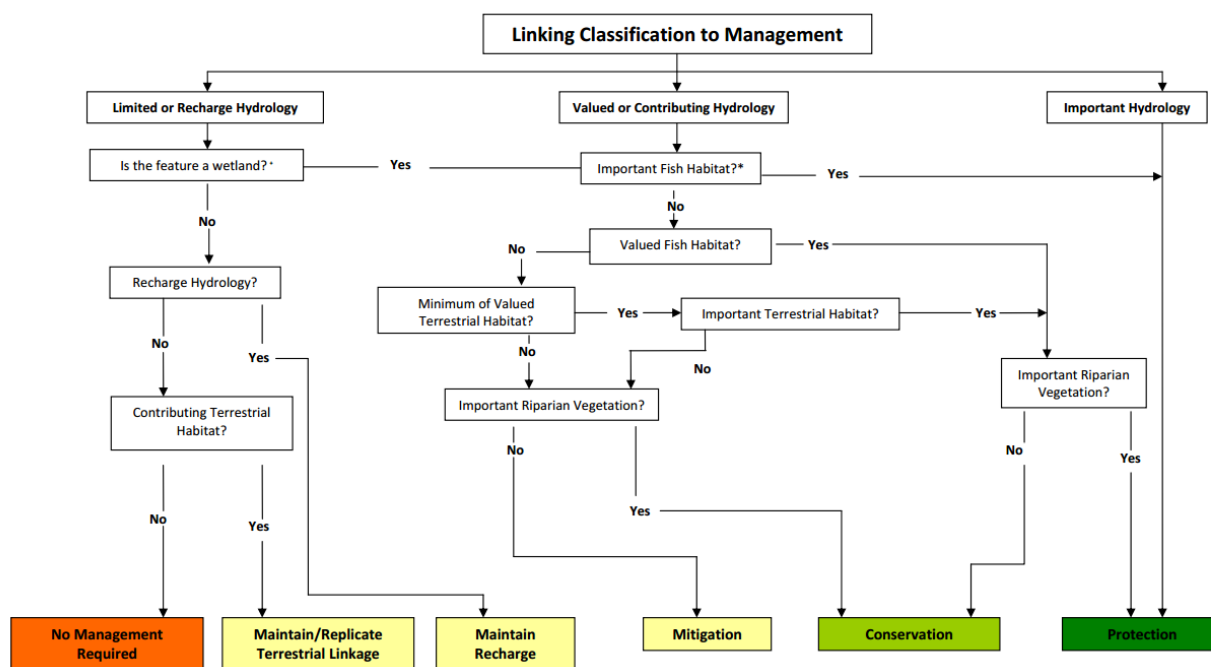


Figure 3. Headwater Drainage Feature Assessment (HDFA) flow chart providing direction on management options

3.1 Management Recommendation

This feature is a small, ephemeral drainage channel between a lawn young cultural meadow (recently abandoned farm land). Following the HDFA Guide flow chart linking component classification to management directives (Figure 2), this reach:

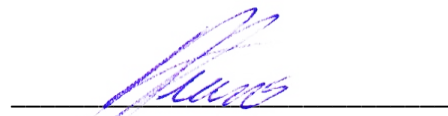
1. Provides Contributing Hydrology;
2. Does not provide Important Fish Habitat;
3. Does not provide Valued Fish Habitat;
4. Does not provide Valued/Important Terrestrial Habitat; and
4. Does not provide Important Riparian Vegetation.

This chain of classification descriptors leads to a management directive of **Mitigation** for this reach. This feature is not required to be maintained per se, but its functionality can be replicated. The feature

currently serves primality to convey lot drainage and, possibly during very wet periods, drainage from the upstream areas via the Fallowfield roadside ditch. Drainage from this feature is currently to a long culvert. Extending the existing culvert across the current site should not anticipated to further reduce functionality of the feature. Allochthonous inputs from the site are currently limit to early spring period. These could be replaced by similar inputs from the roadside ditch if lot level flows were directed to that feature before entry to the culvert. Low Impact Development (LID) options are the preferred approaches for the area stormwater plan to the extent that they can be implemented.

4.0 CLOSURE

This report provides detailed descriptions of the HDF on DRC Phoenix's property, as well as management recommendations to direct future development. Points of clarification can be addressed to the undersigned.



Anthony Francis, PhD
KILGOUR & ASSOCIATES LTD.